

**THE FIRST RECORD OF EREMOCHILINI
(COLEOPTERA: COCCINELLIDAE: EPILACHNINAE)
FROM MEXICO**

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Abstract.—*Eremochilus howdeni*, a new species of the plant feeding subfamily Epilachninae, is described and figured, and a new key to species of *Eremochilus* is presented. Additions and modifications are made to the original generic description.

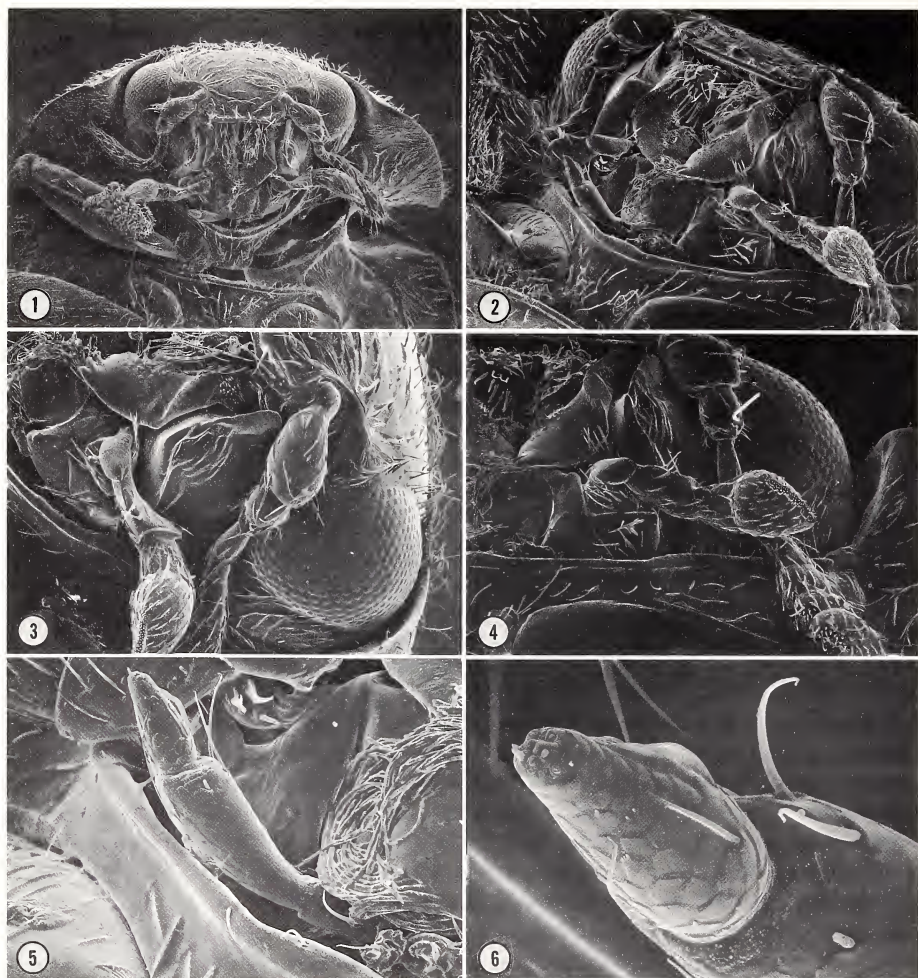
A revision of the subfamily Epilachninae by Gordon (1976) recognized 2 tribes, Epilachnini and Madaini. Subsequently Eremochilini was erected for the aberrant neotropical genus *Eremochilus* (Gordon and Vandenberg, 1987) from Bolivia and southern Brazil. Examination of unidentified Coccinellidae in the Canadian National Collection resulted in discovery of an undescribed *Eremochilus* from Sinaloa, Mexico. If this occurrence represents a tremendous range extension rather than simply a disjunction, we may anticipate both the existence of additional species and perhaps a much broader distribution of each species than is now known. The scarcity of collected specimens is unusual in a taxon of this plant feeding subfamily. The cylindrical body form and extremely modified mouthparts lead one to speculate that it might feed “internally” rather than on leaf surfaces, e.g., in rolled leaves or perhaps even in stems. The latter possibility would account for the scarcity of specimens.

Characters not included in the original generic description are: terminal segment of maxillary palpus short, slightly securiform (Fig. 4), labial palpus slender, terminal segment $\frac{1}{2}$ length of preceding segment (Fig. 5), closeup view (Fig. 6); subgena produced forward nearly to clypeal apex (Fig. 3); base of mandible sinuate (Fig. 2), apex of mandible with 3 blunt teeth (Figs. 2, 3).

Type specimens are deposited in the Canadian National Collection, Ottawa, Ontario (CNC) and the U.S. National Museum of Natural History, Washington, D.C. (USNM).

REVISED KEY TO SPECIES OF *EREMOCHILUS*

1. Clypeal apex emarginate; Bolivia *peregrinus* Weise
- Clypeal apex truncate; Brazil, Mexico 2
- 2(1). Abdominal sterna 2–4 each with transverse rugae medially in basal $\frac{1}{3}$; front of head flat between eyes; Brazil *weisei* Gordon and Vandenberg
- Abdominal sterna 2–4 smooth, punctate medially in basal $\frac{1}{3}$, without rugae; front of head convex between eyes; Mexico *howdeni*, n. sp.



Figs. 1-6. Head structures. Fig. 1, frontal view of head; 2, mandibles, oblique view; 3, mandibular apex, subgena; 4, maxillary palpus; 5, labial palpus; 6, terminal segment of labial palpus.

***Eremochilus howdeni*, new species**

Description: Length 3.5 mm, width 2.20 mm. Form elongate, nearly parallel sided, widest at middle of elytra, strongly convex in lateral view. Color yellowish brown throughout except mandibles dark reddish brown, remainder of mouthparts, antenna yellow. Dorsal pubescence short, entirely decumbent, yellowish white. Surface of head smooth, polished, finely punctured, punctures separated by a diameter or less. Front of head convex between eyes (Fig. 1), eye feebly elongate, narrowed toward base of head. Clypeal apex truncate. Pronotum convex in lateral $\frac{1}{4}$, lateral bead

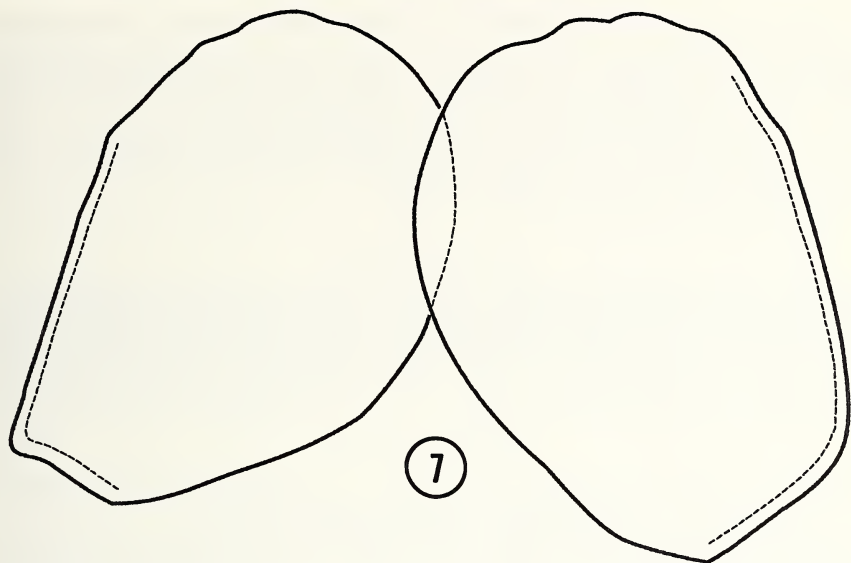


Fig. 7. Female genital plates.

narrow, not reflexed. Pronotal surface slightly alutaceous, shiny, punctures slightly finer than on head, dense, separated by about a diameter in median $\frac{1}{2}$, separated by less than a diameter in lateral $\frac{1}{4}$. Surface of elytron slightly alutaceous, with intermixed fine, coarse punctures, coarse punctures much larger than pronotal punctures, separated by less than to 3 times a diameter. Intercoxal process of mesosternum with coarse, dense, contiguous punctures. Metasternum smooth, polished, with fine, widely scattered punctures except punctures denser on either side of midline. First abdominal sternum medially smooth, polished, with coarse punctures separated by 3 or 4 times a diameter, lateral $\frac{1}{4}$ including postcoxal arc alutaceous, dull, impunctate; postcoxal line on 1st abdominal sternum extended $\frac{2}{3}$ distance to hind margin of sternum; sterna 2–4 with dense, fine punctures in median $\frac{4}{5}$ to $\frac{7}{8}$ separated by less than to twice a diameter, lateral $\frac{1}{5}$ to $\frac{1}{8}$ densely alutaceous, impunctate; sterna 5, 6 densely alutaceous with fine punctures throughout separated by a diameter or less. Fifth abdominal sternum with posterior margin slightly produced medially; posterior margin of 6th sternum and tergum evenly arcuate. Genitalia with 10th tergum apically truncate; genital plate somewhat rectangular with inner angles rounded, without stylus (Fig. 7).

Type material: Holotype female; Mexico, Sinaloa, 5 mi. W. El Palmito, VII.19.64, H. F. Howden (CNC). Paratype female; 1, Mexico, Sinaloa, 15 mi. W. El Palmito, VII.17.64, H. F. Howden (USNM).

Comments: In addition to the key characters, the two previously described species differ from *E. howdeni* as follows: front of head flat between eyes; eye more slender, elongate; lateral $\frac{1}{4}$ of pronotum flat; elytral punctures of uniform size; and sparsely punctured mesosternum. The clypeal apex is truncate in all species except *E. peregrinus*; both *E. peregrinus* and *E. howdeni* lack transverse rugae on sterna 2–4, but

the former has scattered punctures medially and the latter has dense fine punctures throughout. The female genital plate is differently shaped in each species; transverse with strongly rounded apex in *E. peregrinus*, somewhat elongate with feebly rounded apex in the remaining two species with *E. weisei* having the plate base narrow, lateral margin strongly angled from base to apex, *E. howdeni* with plate base broad, lateral margin not angled from base to apex. The species is named for Henry Howden, the collector and noted authority on Scarabaeidae.

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LITERATURE CITED

- Gordon, R. D. 1976. A revision of the Epilachninae of the Western Hemisphere (Coleoptera: Coccinellidae). United States Dept. Agr. Tech. Bull. 1493:1-409.
Gordon, R. D and N. Vandenberg. 1987. Eremochilini, a new tribe of neotropical Epilachninae (Coleoptera: Coccinellidae). Jour. New York Entomol. Soc. 95:5-9.

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